

CLAIMS:

1. A method for access to a medium by a multi-channel device, which medium comprises a transmission system having at least two channels on which a message to be transmitted comprises at least a preamble and a header (PR) plus a succeeding control or data section, characterized in that the preamble and header (PR) of the message are repeated on all 5 the channels.
2. A method as claimed in claim 1, characterized in that the preamble and header (PR) are repeated in parallel on all the channels.
- 10 3. A method as claimed in claim 1, characterized in that the messages to be transmitted are of the request-to-send (RTS), clear-to-send (CTS), acknowledgement (ACK) or data (DATA) type.
- 15 4. A method as claimed in either of claims 1 and 2, characterized in that the multi-channel device operates to standard IEEE 802.11, i.e. 802.11e or 802.11n having a medium access control (MAC) protocol and at least some of the items of information belonging to the MAC protocol are repeated on all the channels.
- 20 5. A method as claimed in any one of claims 1 to 4, characterized in that the medium access takes place under standard IEEE 802.11, i.e. 802.11e or 802.11n, the RTS, CTS and ACK control frames are transmitted on all the channels, and single-channel devices set their network allocation vectors (NAVs) on the basis of the information in the RTS/CTS data packets.
- 25 6. A method for access to a medium by a multi-channel device, which medium comprises a transmission system having at least two channels that the multi-channel device intends to call upon for transmission, characterized by the steps of
 - scanning by the multi-channel device of all the channels to be called upon for transmission,

- finding that a single one of these channels is idle or that a back-off by the device itself is underway on this channel,

- blocking of this channel to other devices by the multi-channel device,

- further scanning of the other channels to be called upon and blocking or

5 reserving thereof on finding that the channel concerned is idle or that a backoff is underway thereon.

7. A method as claimed in claim 6, characterized in that the blocking of the channel is performed by the multi-channel device and the receiving device, each of which

10 emits a reserving message.

8. A method as claimed in claim 7, characterized in that the reserving message is implemented in the form of RTS and CTS frames that are transmitted by the following steps

- transmission of an RTS frame on the free channel by the multi-channel device,

15 so that devices in the area surrounding the multi-channel device that is transmitting will set their NAVs,

- transmission of a CTS frame on the free channel by the receiving device, so that stations in the area surrounding the receiving station will set their NAVs.

20 9. A method as claimed in claim 7, characterized in that multi-channel device carries out its transmission with channel grouping, on all the channels that it has itself previously blocked.

10. A method as claimed in claim 6, characterized in that the blocking of the

25 channel is performed by starting the transmission by the multi-channel station on the single channel, in which case the transmission can be made with or without an RTS-CTS mechanism.

30 11. A method for access to a medium by a multi-channel device, which medium comprises a transmission system having at least two channels that the multi-channel device intends to call upon for transmission, characterized in that a third device (independent of the transmitter and receiver) reserves or blocks the channels in the channel group for the multi-channel device that wishes to transmit.

12. A method as claimed in claim 11, characterized in that the third device is responsible for coordinating medium access to a plurality of channels.

13. A method as claimed in claim 11 or 12, characterized in that in the event of 5 individual channels in the channel group not becoming free simultaneously, the third device causes, alternatively

- (a) one channel or individual channels to be blocked until such time as all the channels in the channel group have become free, or
- (b) a channel that has become free to be assigned immediately to the multi-10 channel device that wishes to transmit.

14. A method as claimed in any one of claims 11 to 13, characterized in that the medium access is performed under standard IEEE 802.11, i.e. 802.11e or 802.11n, and said third device is the hybrid coordinator or point coordinator.

15. 15. A method as claimed in claim 14, characterized in that the point coordinator or hybrid coordinator transmits what is called beacons in parallel on all the channels.

16. 16. Use of a method as claimed in any one of the preceding claims on a 20 transmission system employing the Standard Universal Mobile Telecommunication System (UMTS).

17. 17. A multi-channel device that is intended for accessing a medium that comprises a transmission system having at least two channels, the multi-channel device being intended 25 to perform the method claimed in claim 1 or claim 6 for the purpose of accessing the medium.

18. 18. A wireless network that has a transmission system having at least two channels and that has at least one multi-channel device as claimed in claim 17.